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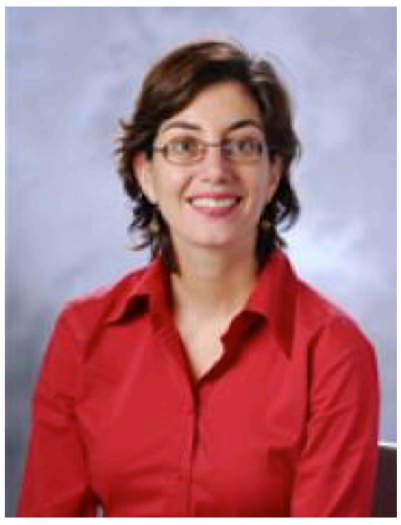

Professor Antonia Antoniou
Georgia Institute of Technology, Atlanta, Georgia

Mechanical Behavior of Hierarchical Nanoporous Metals

Thursday, August 27, 2015
1:30 - 2:30pm
MSL Auditorium (TA-03, Bldg. 1698, Room A103)

Abstract: Nanoporous (NP) metal foams are a unique class of materials that are characterized by extremely high surface-to-volume ratios and possess such desirable properties of metals as high electrical conductivity, catalytic activity, and strength. This unusual combination of properties is highly attractive in many applications including catalysts, sensors and filters. Recent results on understanding of mechanical properties of hierarchical nanoporous metals where struts and joints are themselves nanostructured e.g. nanocrystalline and or nanotwinned will be presented. The deformation mechanisms in such hierarchical systems may deviate from relatively well understood NP metals with micron sized grains such as NP Gold.

Bio: Antonia Antoniou is an assistant professor in the Woodruff School of Mechanical Engineering at Georgia Institute of Technology. She was previously a postdoctoral research fellow at the Center for Integrated Nanotechnologies in Los Alamos National Laboratory. She earned her Ph.D in 2006 in Engineering Mechanics from Iowa State University. Her research interests are in the intelligent, knowledge-driven synthesis and experimental characterization of novel nanostructured material systems for applications in such fields as energy and security. Of particular interest is the accurate experimental characterization of the material mechanical properties at the nanoscale with the aim of identifying fundamental ingredients of the structure-property relation.

If you would like to meet with Prof. Antoniou, please contact Nathan Mara at namara@lanl.gov, or 667-8665

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